

Blueberries Growing Guide

Beyond bearing delicious fruit each year, blueberries are also a hardy and attractive landscape plant. Spring brings clusters of white to pink blossoms; summer is all about the delicious berries, and in fall the foliage of some varieties turns brilliant red before the leaves drop for the winter. There are several different types of blueberries with different climate preferences, so you can grow them throughout most of the continental U.S.



Blueberry Facts

- One blueberry bush can produce up to 6,000 blueberries each year.
- Anthocyanin, the pigment that gives blueberries their distinctive color, has antioxidant properties that provide numerous health benefits. Among the health benefits attributed to blueberries are protecting against heart disease and cancer, maintaining bone strength, helping to controlling diabetes, and slowing age-related cognitive decline.
- The blueberry (genus *Vaccinium*) is one of the few commercially grown fruits that is native to North America. The wild relatives are low-bush blueberries native to the northeastern parts of North America. The berries produced by these plants are smaller and sweeter than those of cultivated highbush varieties.
- An important food source for Indigenous Peoples, wild blueberries are used in a variety of ways. *Sautauthig* is a simple pudding made with fresh or dried blueberries and dried, cracked corn mixed with water. Dried blueberries are often used to make *pemmican* by combining them with dried fish or meat and tallow, forming the mixture into cakes, and baking them dry in the sun.
- Native Americans also use blueberries for their healing properties, incorporating roots, leaves, flowers, and fruits in various preparations. Blueberry juice is used to treat coughs, and a tea brewed from the leaves is used as a tonic and to aid women during childbirth.
- Look closely at a berry and you'll see a five-pointed star on the blossom end. That's why some North American Indigenous Peoples call blueberries "star berries." They believe the Great Spirit sent the fruits to ease their children's hunger during times of famine.
- The waxy, silvery sheen on blueberries is called the "bloom." It's a natural substance produced by the plant that helps seal in moisture and deter pests.
- Blueberries play an important role in the ecosystem. A wide range of animals, including black bears, foxes, coyotes, opossums, and porcupines eat blueberries. Many species of songbirds eat blueberries and use the shrubs as shelter. Blueberry flowers are an important nectar source for native bees.

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How to Grow

Choosing Varieties

Blueberries are classified into three major groups:

Highbush blueberries are the most commonly planted, both commercially and in home and school landscapes. This group can be further split into Northern Highbush and Southern Highbush. Although both are rated hardy in zones 4-7, the southern varieties tend to be a bit less cold-hardy and a bit more tolerant of heat. These varieties grow up to 7' tall, though they can be kept shorter with annual pruning.

Rabbiteye blueberries are the largest plants, growing up to 12' tall. They're native to the southeastern US and are more tolerant of heat, thriving in zones 7-9.

Lowbush blueberries are super-hardy and grow in zones 3-7. Aptly named, they grow just 12-18" high and produce small, highly flavored berries. They're sometimes called "wild blueberries." They're less commonly grown as a food crop because they produce a smaller yield and the low-growing shrubs make harvesting a chore. Think of them as an attractive landscape plant that offers a berry bonus.

Highbush blueberries are somewhat self-fertile, which means if you plant just one shrub (or a few shrubs of one variety) you'll get some berries. However, if you plant several different varieties of the same species in close proximity, cross-pollination will result in a much higher yield. Rabbiteye blueberries, in particular, produce much more fruit if cross-pollinated with a different variety, so it's essential to plant a compatible variety close by. Note that the blueberry varieties must be compatible for cross-pollination to occur. Because there are so many varieties of highbush and rabbiteye blueberries, plant labels or descriptions sometimes provide this compatibility information. For example, 'Premier' rabbiteye blueberry will produce the most berries if also planted with an 'Austin' and/or 'Alapaha' rabbiteye blueberry plant. (Check out more examples of compatible plants from [Clemson Cooperative Extension](#).)

Another thing to consider when selecting your blueberry plants is how much cold weather you receive in your area. Like many fruiting shrubs and trees, blueberries need a certain number of chill hours (chill hours are defined as time when the temperature drops below 45 degrees F) in order to produce flowers. Find varieties whose chill hour requirements match the climate conditions of your area. (Your state's cooperative extension service can help you determine your region's chill hours.)

Choosing a Planting Site

Like many garden plants, blueberries need full sun and rich, moist, well-drained soil. What sets them apart is their need for acidic soil. Blueberries grow best in soils with a pH of 4.5 to 5.5, which is much more acidic than the recommended pH for most plants (6.5 to 7.0). Recall that the pH scale runs from 0 (very acidic) to 14 (very alkaline) with 7 being neutral. Each number indicates a 10-fold difference in acidity; that is, a soil with a pH of 6.0 is 10 times more acidic than a soil with a pH of 7.0.

The pH of soil affects the availability of nutrients in the soil. At too high or too low a pH, many plant nutrients will be "locked up" in complex molecules, rendering them unavailable for uptake by plant roots. This is especially true of iron, a mineral that blueberries require in relatively large amounts. Iron becomes more available for uptake at a lower pH, which is why in many (if not most) gardens, modification of soil pH will be necessary. Raised beds are ideal for growing blueberries because you can fill them with the acidic soil the plants need or add amendments to acidify the soil without affecting other plants.

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Sulfur is the standard when it comes to lowering soil pH. It works slowly, but it does a better job and lasts longer than alternatives, such as peat moss. How much sulfur? It depends on the type of soil and its current pH. It's best to send soil samples to a testing lab that provides not only test results but also recommendations for amending the soil for the crops you're growing. Ideally, you should test the soil a year in advance of planting, so you can apply the necessary amendments and give them time to work.

A common sulfur recommendation would be to apply "30 lbs. per 1000 sq. ft." What does that mean for your 4' x 8' raised bed? Divide 30 by 1000 and you get about .03 lbs. per square foot. Multiply that by the 32 square feet in your bed and you get 0.96 — so based on those lab results you'd want to apply about one pound of sulfur and thoroughly mix it into the raised bed soil.

Planting Blueberries

Container-grown blueberries can be planted in the ground in early spring or fall. First, be sure the soil pH is correct. Then dig a hole two to three times as wide as the container but no deeper. You want the root ball to sit on native soil right so the top of the root ball is at or slightly higher than the surrounding soil. You can mix some slow-release organic fertilizer granules into the backfill soil. Remove the plant from its pot, place it in the center of the hole, and begin backfilling. Double-check that the plant is sitting at or slightly higher than the surrounding soil. As you backfill, press on the soil and apply water to eliminate air holes. Once the hole is filled, smooth the soil so it inclines slightly away so water doesn't puddle around the stem.

Bareroot blueberries, which are sold in a dormant state, are planted in early spring in cold-winter regions. In zones 7-9, they can be planted in early winter. Soak the roots in water for a few hours while you prepare the planting holes. Set the plant in the hole so the crown, where the stem meets the roots, sits at ground level. Spread out the roots while you back fill, taking care to push soil in between the roots. Water as you go to eliminate air pockets.

Caring for Your Blueberries

Water. Irrigate as needed to keep the soil moist but not soggy. Blueberries — even established plants — have relatively shallow roots and need regular watering if the weather is dry. A soaker or drip irrigation system is ideal.

Mulch. Maintain a 3" layer of organic mulch around the plants, keeping it a few inches away from the stems. Shredded bark, pine straw, and chopped leaves are good choices. The mulch will conserve soil moisture, keep soil cool, and deter weeds.

Fertilize. A spring application of compost plus some granular fertilizer will likely be sufficient. Every few years test the soil's pH to ensure it lies at the optimal 4.5 to 5.5 so the plants are able to take up the nutrients you apply.

Pests. Blueberries are relatively pest-free. The biggest problem is birds, which will devour the berries as quickly as they ripen. If hungry birds are a problem, cover the shrubs with bird netting as soon as you see the first ripe berry, securing the netting to the soil so birds can't sneak underneath and get trapped.

Harvest

Berries will turn from green to blue when they're ready to harvest. They'll be plump, slightly soft compared to unripe berries, easily separate from the stem, and have a sweet flavor. Since the berries ripen over the course of several weeks, you'll need to go blueberry picking every week or so. Over-ripe berries will begin to shrivel and fall to the ground.

Tips

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- Blueberry plants need acidic soil in order to take up the iron they need. One symptom of iron deficiency is yellow leaves. Check the soil pH every year or two and amend it with sulfur if soil pH is above 5.5.
- Different blueberry varieties ripen at different times. To extend the harvest, plant a combination of early-, mid-, and late-season varieties.
- Blueberry bushes produce best on young wood. Starting when the bushes are about four years old, prune them annually in late winter or early spring. Remove low, spreading branches, and cut up to one third of the oldest stems back to the ground to encourage new growth. Prune the tallest branches to keep the bush to a manageable height.

Enjoying Your Harvest

Refrigerate blueberries as soon as possible after the harvest. In addition to baked goods and jams, blueberries have a place in savory dishes, such as salsas and sweet-and-sour sauces. An internet search will bring up loads of options. Blueberries also freeze well; once thawed, they're best used in baked goods and cooked sauces.

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